

CLAIMS

What is claimed is:

1. A cutting tool comprising:

a blade having a front insert retaining portion and a rear body portion, defining a front to rear longitudinal direction;

the front insert retaining portion being provided with exactly two insert receiving pockets, one above the other and separated by a rearwardly extending recess, in a side view of the blade;

the two insert receiving pockets being formed on opposite sides of the blade with a first insert receiving pocket formed in a right side face of the front insert retaining portion and a second insert receiving pocket formed in a left side face of the front insert retaining portion; and

a first cutting insert clamped in the first insert receiving pocket and a second cutting insert clamped in the second insert receiving pocket.

2. The cutting tool according to claim 1, wherein the two cutting inserts are identical.

3. The cutting tool according to claim 1, wherein

each insert receiving pocket comprises a side wall provided with a threaded bore extending in a direction transverse to a width of the body portion; and

each cutting insert has a through bore and is retained in a corresponding insert receiving pocket by a clamping screw that passes through the through bore and threadingly engages the threaded bore.

4. The cutting tool according to claim 3, wherein each cutting insert has a top surface, a bottom surface and a side surface connecting the top and bottom surfaces, at least one cutting edge extending on the side surface substantially between the top and bottom surfaces, the through bore extends between the top and bottom surfaces and the bottom surface of the cutting insert abuts the side wall of the insert receiving pocket.

5. The cutting tool according to claim 4, wherein each cutting insert has a polygonal shape.
6. The cutting tool according to claim 4, wherein each cutting insert has two pairs of diametrically opposed identical cutting edges.
7. The cutting tool according to claim 4, wherein in a front view of the cutting tool the two cutting edges overlap between planes (P5, P6) passing through inner extremities of the cutting edges and parallel to side faces of the insert retaining portion.
8. The cutting tool according to claim 4, wherein each of the two cutting inserts protrudes outwardly with respect to a side face of the blade adjacent the top surface of the cutting insert.
9. The cutting tool according to claim 1, wherein each insert receiving pocket comprises:
  - a rear wall, transversely directed to the longitudinal direction and substantially perpendicular to the right and left side faces;
  - a lower wall adjacent to the rear wall and substantially perpendicular to the right and left side faces;
  - a side wall that is substantially perpendicular to the rear and lower walls; and
  - a threaded bore formed in the side wall.
10. The cutting tool according to claim 9, wherein the side wall of each insert receiving pocket is adjacent a corresponding side face of the insert retaining portion.
11. The cutting tool according to claim 10, wherein the side wall of each insert receiving pocket is slanted at an acute angle ( $\delta$ ) with respect to the adjacent side face of the insert retaining portion.
12. The cutting tool according to claim 10, wherein the threaded bore is substantially perpendicular to the adjacent side face of the insert retaining portion.

13. The cutting tool according to claim 9, wherein the lower walls of each of the insert receiving pockets define therebetween an internal acute angle ( $\beta$ ).
14. The cutting tool according to claim 13, wherein the internal acute angle ( $\beta$ ) is in the range of  $0^\circ$  to  $50^\circ$ .
15. The cutting tool according to claim 13, wherein each cutting insert has at least one cutting edge that equally distanced from an apex (Q) of the internal acute angle ( $\beta$ ).
16. The cutting tool according to claim 1, wherein the body portion extends rearwardly from the insert retaining portion in the longitudinal direction, the body portion being prismoidal in shape having a right side face and a left side face connected by top and bottom faces
17. The cutting tool according to claim 16, wherein a distance (W) between right and left side faces of the body portion is substantially smaller than a height dimension (H1) between top and bottom faces of the body portion.
18. The cutting tool according to claim 16, wherein top face and the bottom face are slanted at an acute angle ( $\alpha$ ) with respect to the left side face of the body portion.
19. The cutting tool according to claim 16, wherein the front insert retaining portion has a height dimension (H2) that is larger than a height dimension (H1) between the top and bottom faces of the body portion.
20. The cutting tool according to claim 1, wherein the body portion is integrally connected to the front insert retaining portion.
21. The cutting tool according to claim 1, wherein the cutting tool has a cutting width (W1) between 6 to 10 mm.

22. A cutting tool assembly comprising:
  - an annular disc having an axis of rotation (0); and
  - a plurality of cutting tools clamped on said annular disc, each cutting tool comprising:
    - a blade having a front insert retaining portion and a rear body portion, defining a front to rear longitudinal direction;
    - the front insert retaining portion being provided with exactly two insert receiving pockets, one above the other and separated by a rearwardly extending recess, in a side view of the blade;
    - the two insert receiving pockets being formed on opposite sides of the blade with a first insert receiving pocket formed in a right side face of the front insert retaining portion and a second insert receiving pocket formed in a left side face of the front insert retaining portion; and
    - a first cutting insert clamped in the first insert receiving pocket and a second cutting insert clamped in the second insert receiving pocket.
23. The cutting tool assembly according to claim 22, wherein each cutting insert has at least one operating cutting edge, the operative cutting edges of the cutting inserts on the cutting tools being equally distanced from the axis of rotation (O).
24. The cutting tool assembly according to claim 23, wherein the plurality of the cutting tools are equally peripherally distributed on an end face of said disc.
25. The cutting tool assembly according to claim 23, wherein the insert retaining portion of each of the cutting tools is inwardly directed with respect to the axis of rotation (O).